marantz®

Model 6100 Turntable

Handbook of Instructions

We Sound Better

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Model 6100 Turntable

MARANTZ CO., INC. 20525 NORDHOFF STREET, CHATSWORTH, CALIFORNIA 91311
A WHOLLY-OWNED SUBSIDIARY OF SUPERSCOPE INC., CHATSWORTH, CALIFORNIA 91311

FOREWORD

To obtain maximum performance and enjoyment from the Model 6100 Turntable, please study these instructions carefully. Although installing the turntable is not complicated, the steps in the set-up procedure should be followed methodically in the order that they are given. Our recommended procedures will assure you of securing the superb performance for which the Model 6100 is capable.

For quick identification of the controls, adjustments and connection facilities on the Model 6100 Turntable, all references to them in this manual will be printed in **BOLDFACE** type.

AFTER UNPACKING

The turntable has been packed in material specially designed to protect it from damage in shipment. After removing the turntable from the carton, put the packing materials, fillers and cushioning in the carton and store it for future use. The packing materials will prove valuable in preventing damage should it become necessary to transport or ship the Model 6100. Be especially careful that you do not inadvertently throw away or lose any of the parts packed with the unit.
Instructions for repacking are shown on page 9 of this manual.

Please inspect your Model 6100 Turntable carefully for any signs of shipping damage. Our very strict quality control and professional pride ensure that each Model 6100 left the factory in perfect condition. If the unit is damaged or fails to operate, immediately notify your dealer. If the unit was shipped to you directly, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for shipping damage. Save the carton and all packing material as evidence of damage for their inspection. Should assistance be required, the Marantz Company will cooperate fully in assisting your claim.

Please fill out and mail the Warranty Registration Card within ten days of purchase. The card will remain on file at the Marantz Company for the duration of the warranty period. We also strongly advise that you retain your sales receipt to provide proof of purchase in the event that Warranty service is sought.

GENERAL DESCRIPTION

The Model 6100 features an AC synchronous motor belt drive system, a precision tone arm with anti-skating adjustment, hydraulically damped cueing, and low capacitance cables suitable for use with CD-4. The rubber mat on the platter is impregnated with anti-static compounds to prevent static electricity build-up that can cause dirt particles to be attracted to the record surfaces.

AC Line Operation

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

QUICK REFERENCE INDEX

Figure 1 shows the location of the main controls and adjustments on the Model 6100. Listed by each feature is the number of the page where a description about the feature appears.

Before proceeding with connecting your new turntable, take a few moments to acquaint yourself with some of the features and terminology you will encounter in this book.

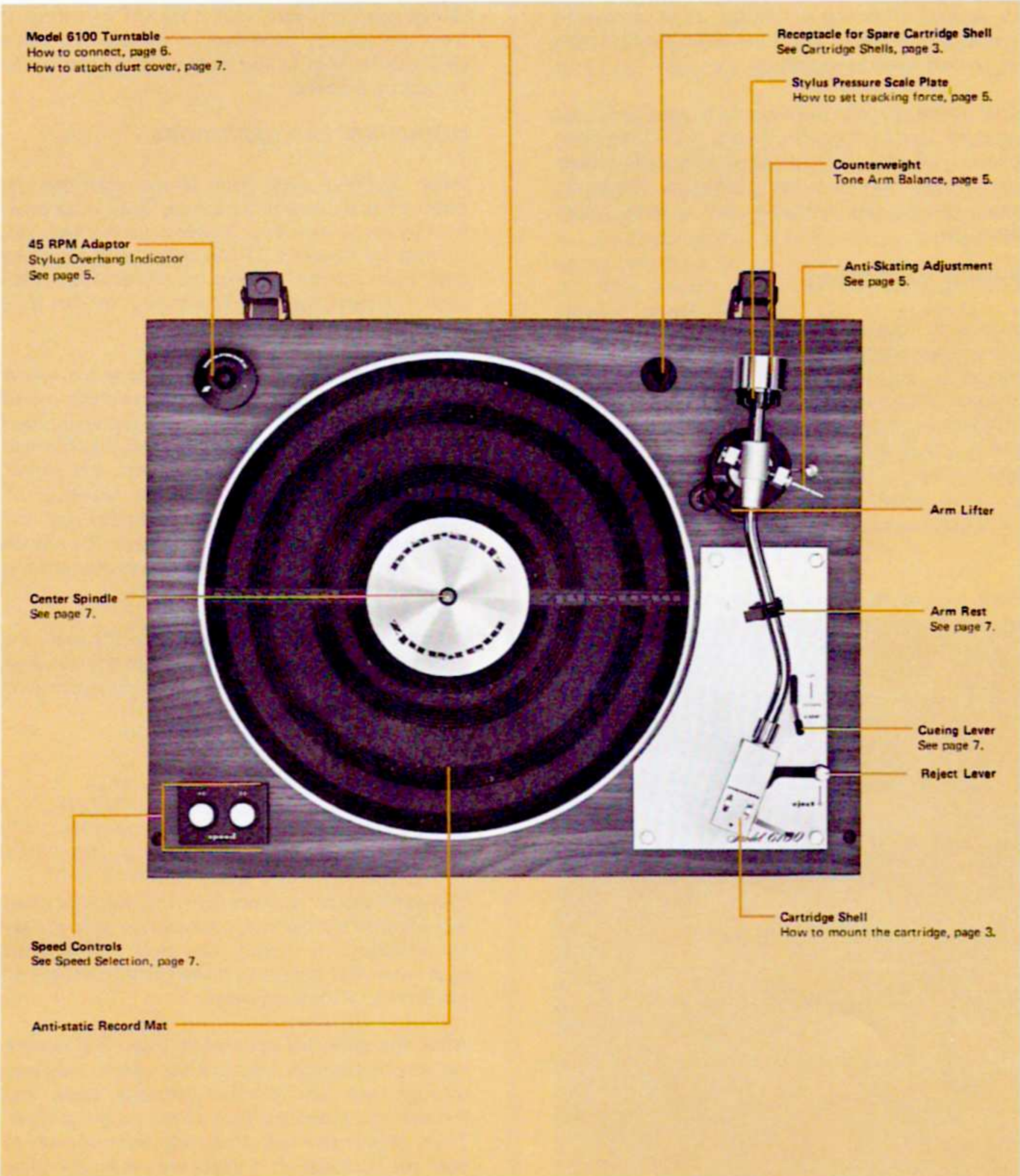


Figure 1. Main Controls and Adjustments

PREPARATION FOR USE

TURNTABLE LOCATION

Optimum performance will be secured from the turntable and tone arm by placing the unit on a flat, level, vibration-free surface that is resistant to accidental jarring or impact. It is considered standard practice to avoid installing the turntable on or near speaker enclosures.

The power transformers used in amplifiers can produce large magnetic fields. If a magnetic phono cartridge is operated within such a magnetic field, hum may be produced. Therefore, avoid placing the turntable near a large power amplifier.

PHONO CARTRIDGE

Any high quality stereo phono cartridge will provide excellent results with the Marantz 6100, including cartridges designed for CD-4 four channel reproduction. If you haven't already obtained a cartridge, your Marantz dealer can assist you in selecting one which will suit your audio needs.

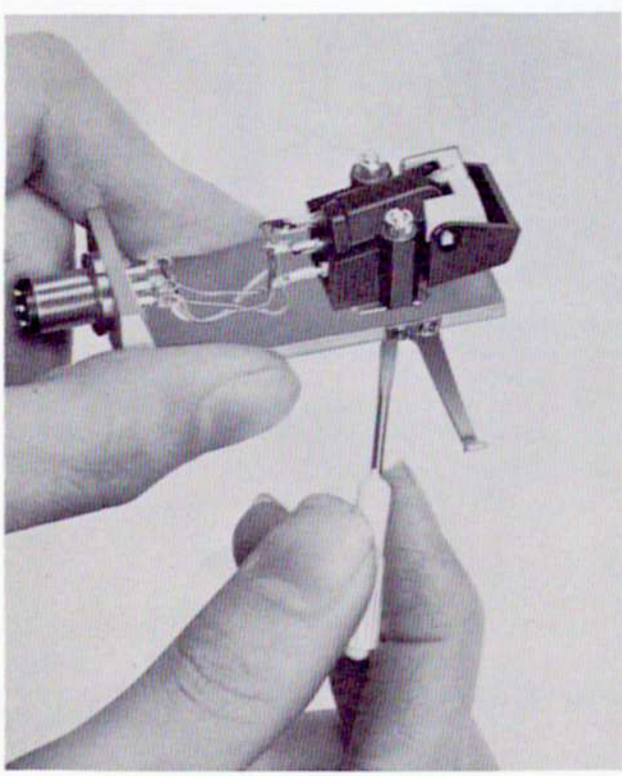


Figure 2. Mounting the Cartridge

CARTRIDGE SHELLS

The Model 6100 is supplied with one cartridge shell. If you wish to interchange more than one cartridge, additional shells may be obtained from your Marantz dealer. (It is far easier to interchange and compare two different cartridges if they are already mounted in shells!) The spare shell can be kept in the receptacle located in the surface of the base.

MOUNTING THE CARTRIDGE

When working with your phono cartridge, be careful not to damage the stylus. Once it becomes bent by rough handling, it cannot be straightened; it must be replaced. If the cartridge is equipped with a protective clip, keep the clip attached until after the cartridge shell is installed on the tone arm.

The cartridge shell plugs into the tone arm and is secured by a threaded sleeve. The cartridge is held inside the shell by two screws which pass through the long slots in the top of the shell. Appropriate mounting screws, nylon washers, nuts, and a small screw driver are provided with the Model 6100. Spacers, if needed, will be provided by the cartridge manufacturer. Obviously, it's much easier to install the cartridge when the shell is detached from the tone arm.

Before the cartridge is screwed into the shell, the small clips at the ends of the wires in the cartridge shell should be pushed onto their corresponding cartridge connection pins.
The wires are color coded as follows:

RIGHT CHANNEL HOT	– RED
RIGHT CHANNEL GROUND	– GREEN
LEFT CHANNEL HOT	– WHITE
LEFT CHANNEL GROUND	– BLUE

The cartridge or its accompanying technical sheet will identify the cartridge connection pins. It may be necessary to slightly compress the terminal clips with your fingers to make them fit snugly on the prongs of some cartridges.

After the wires are connected, insert the mounting screws through the supplied plastic washers, through the top of the cartridge shell, and through the mounting tabs on the cartridge itself. Then, attach the two nuts, just tight enough to hold the cartridge (it is likely they will have to be loosened again to adjust the placement of the cartridge in the shell).

Tuck the lead wires neatly behind the cartridge.

Next, attach the cartridge shell to the tone arm: Plug it in to the receptacle on the arm, push inward to compress the four connector pins inside, and twist the sleeve to tighten.

ADJUSTMENTS

Although the cartridge is mounted, the turntable is not yet ready to play records. First, the tracking angle must be checked; then the stylus overhang must be adjusted; then the tone arm balance, tracking force, and anti-skating force. The following paragraphs will explain these adjustments.

STYLUS TRACKING ANGLE

When setting up the arm for playing, it is important to check the tracking angle, because improper tracking angle will cause distortion and premature record wear. Most phono cartridges are designed so that when the cartridge is mounted on a surface parallel with the record surface, the stylus will track at the proper angle (see Figure 3). The surface inside of the cartridge shell (against which the cartridge is mounted) is parallel to the record surface when the stylus is touching the record surface. Visually check the angle of the tone arm in actual playing position. If it is not level and parallel with the record surface, then it is necessary to change the height of the tone arm by using the spacers supplied with the phono cartridge. This, of course, requires removing and remounting the cartridge, and some trial and error technique. With most cartridges, no spacers will be necessary.

NOTE: **Some cartridges are built so that their bodies are at an angle with respect to their own mounting tabs. No attempt should be made to change this angle. Simply make sure that the cartridge mounting tab surfaces are parallel to the tone arm shell mounting surface before proceeding with the arm height adjustment.**

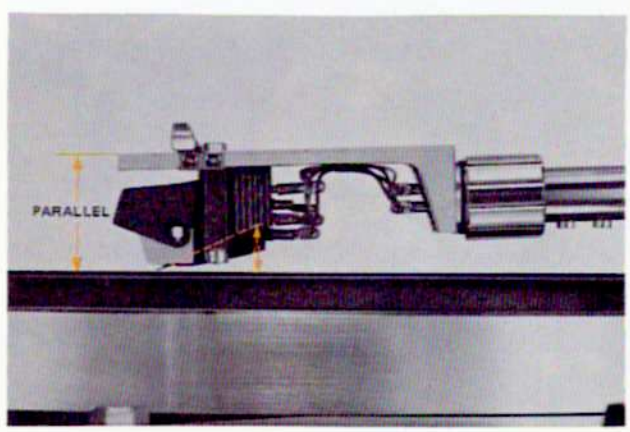


Figure 3. Tracking Angle

STYLUS OVERHANG

The Model 6100 Turntable is designed to operate with the least distortion when the tip of the stylus is at a particular distance from tone arm pivot. For this reason, the cartridge shell is slotted, allowing the cartridge with its mounting screws to be slid toward or away from the pivot point. This, in effect, changes the radius of the arc described by the stylus.

Supplied in the accessory kit is a 45 RPM spindle adaptor. The adaptor has been specially marked with an arrow and a cross to aid you in setting the proper stylus overhang. Proceed as follows:

1. With the turntable unplugged, place the 45 RPM adaptor on the center spindle with the arrow pointing to the rear of the turntable.
2. Temporarily remove the counterweight from the tone arm.
3. Remove the arm from its arm rest and remove the protective cover (if any) from the stylus.
4. Place the stylus tip over the cross mark on the 45 RPM adaptor. It is all right for the stylus to gently touch the adaptor for checking purposes, but do not exert any downward pressure on it, or the stylus may be damaged.
5. If the stylus does not align with the cross mark, then adjustment is necessary. Place the arm in the arm rest, loosen the cartridge mounting screws, adjust, and measure again.
6. Make sure that the cartridge is installed straight; the sides of the cartridge must remain parallel to the sides of the shell.
7. When you are sure the cartridge is in the correct position, place the arm in the arm rest and snug up the mounting screws.
8. Replace the counterweight on the tone arm.



Figure 4. Stylus Overhang Adjustment

VERTICAL TONE ARM BALANCE

The adjustable counterweight at the end of the tone arm establishes tone arm balance and stylus tracking force. Since no two types of cartridges weigh the same, the balance and tracking force must be adjusted for each cartridge being used.

First, to establish a point of reference, the entire arm assembly (with cartridge installed) must be balanced. If the cartridge has a removable stylus protector, remove it, (as you would to play a record). Release the tone arm from the arm rest.

To balance the arm, adjust the position of the counterweight by rotating it. A numbered stylus pressure scale plate is located immediately in front of the counterweight. Rotating the scale plate alone does not change the counterweight's position. To change the balance, grasp and turn the counterweight itself.

Adjust the weight so that the arm is level (parallel to the turntable surface) with the cartridge suspended in mid air. Then, without moving the counterweight, set the stylus pressure scale plate to indicate zero. This establishes a reference point for setting the tracking force, which is the next adjustment.

TRACKING FORCE

For the recommended tracking force, refer to the instructions that accompany the cartridge.

Tracking force, the downward pressure of the stylus against the record, is produced by simply setting the arm off balance in the appropriate direction. That is, the counterweight is screwed inward (toward the arm pivot) until the desired downward pressure is achieved.

The stylus pressure scale plate is in frictional contact with the counterweight, so that they rotate together when the counterweight is turned. The numbers on the scale plate correspond to the tracking force measured in grams. So, if the desired tracking force is two grams, turn the counterweight inward until the stylus pressure scale plate registers 2.

ANTI-SKATING ADJUSTMENT

The anti-skating weight is provided to counteract the natural tendency of the arm to "skate" toward the center of the record as it is being played. The more tracking force used, the more anti-skating force required.

The anti-skating force can be adjusted by placing the loop in the end of the monofilament line around one of the notches in the anti-skate lever. See Figure 5 for the values these notches represent. Set the anti-skating force to the same value as the tracking force.

Place the arm in the arm rest.

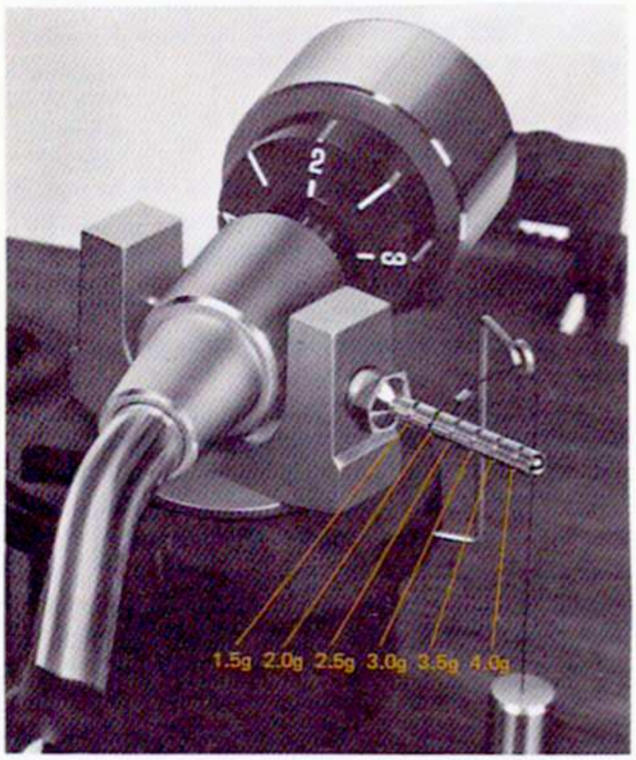


Figure 5. Anti-Skate Adjustment

CONNECTION TO AMPLIFIER

Plug the left and right output cables into the PHONO jacks of your preamplifier or receiver. (The red plug is the right stereo channel.) Be sure the plugs are inserted completely. Loose connections will cause hum and noise.

Connect the ground wire which runs adjacent to the two output cables to the CHASSIS GROUND BINDING POST of your receiver.

NOTE: **Depending on the cartridge there may be occasions where it is more advantageous to leave the ground wire disconnected. Connect your turntable in the condition which produces the best performance.**

Then, plug the AC power cord into an outlet supplying the proper voltage, or into one of the SWITCHED convenience outlets on the back of your receiver. The polarity of the AC power cord sometimes has a bearing on the amount of hum produced. After the system is set up and playing, try reversing the polarity of the plug. Again, depending on the cartridge, it may improve system performance.

SIMPLIFIED OPERATING PROCEDURES

1. Turn on your amplifier system and select the Model 6100 Turntable as the source input.
2. Place a record on the turntable. For a 45 RPM record, fit the supplied adaptor over the turntable center spindle.
3. Place the **CUE** lever in the **UP** position.
4. Release the arm rest safety lock, and position the arm so that the stylus is above the desired groove of the record. The turntable will begin rotating.
5. Select the desired speed by depressing the **45** or **33** button (see "SPEED SELECTION", on this page).
6. While the record is turning, you may wish to clean its surface with a suitable cleaning device before playing.
7. Move the **CUE** lever to the **DOWN** position. The stylus will slowly descend to the selected groove. A small amount of practice will enable precise record cueing.
8. To lift the tone arm at any time, move the **CUE** lever to **UP**.
9. When the record reaches its end, the turntable mechanism will automatically lift the arm, return it to the arm rest, and shut off the motor.
10. To stop the turntable at points before the end of the record, you may either (a) pull the **REJECT** lever, (b) use the **CUE** lever to lift the arm rest, or if you're in a hurry, (c) lift the arm manually and place it in the arm rest.

CUEING LEVER

The cueing lever, marked **CUE**, controls the vertical motion of the arm lifter. The hydraulically-damped arm lifter gently raises and lowers the arm and stylus. Obviously, using this slow motion device is much safer for your records than lowering the stylus by hand.

The **CUE** lever operates in all modes. It can be used at any time to lift the stylus off the record.

REJECT LEVER

The **REJECT** lever activates the reject cycle of the turntable. To operate the reject cycle, pull the **REJECT** lever momentarily, then release it: The arm will lift and return to the arm rest, and the turntable will automatically shut off.

SPEED SELECTION

Two pushbuttons are provided on the top panel to select the desired RPM (33 or 45). These buttons are mechanically linked to the shifting fork inside which shifts the drive belt from the larger to the smaller portion of the motor pulley.

To accomplish a speed change, it is necessary that the motor be running and the platter rotating. Otherwise, the belt will not move from one portion of the pulley to the other, and the shifting fork will put a crease in the belt. This, in turn, may cause wow and flutter.

ARM REST

The arm rest holds the arm while not in use. In the event the turntable were jostled or bumped, the lock on the arm rest secures the arm and prevents damage to the stylus.

The turntable rotation stops when the arm is manually placed in the arm rest.

TURNTABLE CENTER SPINDLE

The Model 6100 center spindle is designed to precisely fit record center holes conforming to the NAB standard. However, some records may fit tightly on the spindle, because in the record stamping process some scraps of plastic were left sticking to the edge of the center hole. In such a case, the scraps can easily be removed by inserting the point of a pencil in the center hole and turning the pencil.

DUST COVER

The dust cover attaches to the base by means of two slotted brackets which fit into two spring-loaded hinges on the rear of the base. The dust cover is designed to prevent dust from settling on your records while they play. However, it is also important to keep the dust cover closed when no records are being played, to prevent dust from settling on the record mat. Even though this dust does not land directly on a playing record, it can be later transferred to the record surface by static electricity. If you accidentally leave the dust cover open for a long period of time, clean the record mat before playing any records.

SPECIFICATIONS

Drive System	Belt Drive System
Drive Motor Type	AC Synchronous
Rumble (DIN 45539 Weighted)	-60 dB
Wow and Flutter (WRMS) NAB	0.08%
Effective Tone Arm Length	213 mm (8-3/8 inches)
Platter Weight	720 g (1.6 lbs.)
Platter Diameter	300 mm (11-13/16 inches)

GENERAL

Power Requirements	120 V AC, 50/60 Hz
Power Consumption	11 Watts
Dimensions:	
Width	440 mm (17-15/16 inches)
Height	165 mm (6-1/2 inches)
Depth	350 mm (13-3/4 inches)
Weight:	
Unit alone	7 kg (15.4 lbs.)
Packed for Shipment	10.4 kg (23 lbs.)

MAINTENANCE

The Model 6100 Turntable and arm are factory lubricated and sealed. No further lubrication is needed for these assemblies.

CLEANING THE MODEL 6100

The unit should be kept clean and dust-free. A cloth dampened with water will remove most dust. To clean fingerprints or oil marks from the anodized aluminum surface or the plastic dust cover, use a soft lint-free cloth or cotton swab slightly dampened with a mild solution of detergent and water. Never use scouring pads, steel wool, scouring powders or harsh chemical agents such as lye solution. The wooden base may be polished with a commercial furniture polish.

The rubber drive belts should be kept free of oil and grease. If the belt requires cleaning (as evidenced by shiny spots or slippage), use a piece of cloth or cotton swab moistened with denatured alcohol to remove all traces of oil. If necessary, clean the motor pulley and the area of the platter which contacts the belt. Be sure to wash your hands before cleaning the drive belt.

REPAIRS

Only the most competent and qualified service technicians should be allowed to service the Model 6100. The Marantz Company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty, call the toll free telephone number listed on the back of the Warranty to obtain the name and address of the Marantz Authorized Service Station nearest your home or business. In many cases, the dealer where you purchased your Marantz unit will be equipped to provide service.

Marantz Company, Inc.
National Service Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.

REPACKING FOR SHIPMENT

Should it become necessary to repack your Model 6100 for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

a. Pack the unit carefully, using the original material as shown in Figure 6.
   PLEASE NOTE that if you have discarded, lost, or damaged the packing material, new packing material may be obtained by writing to the **Marantz Technical Services Department.** The carton, its filters, and packing instructions will be returned to you at a nominal charge.
b. Ship via a reputable carrier (**do not use Parcel Post**) and obtain a shipping receipt from the carrier.
c. Insure the unit for its full value.
d. Be sure to include your return address on the shipping label.

CAUTION: DO NOT SHIP THE TURNTABLE WITH THE PLATTER INSTALLED. DOING SO MAY DAMAGE THE TURNTABLE SPINDLE. REMOVE THE PLATTER AND PACK AS ILLUSTRATED FOR SHIPPING.

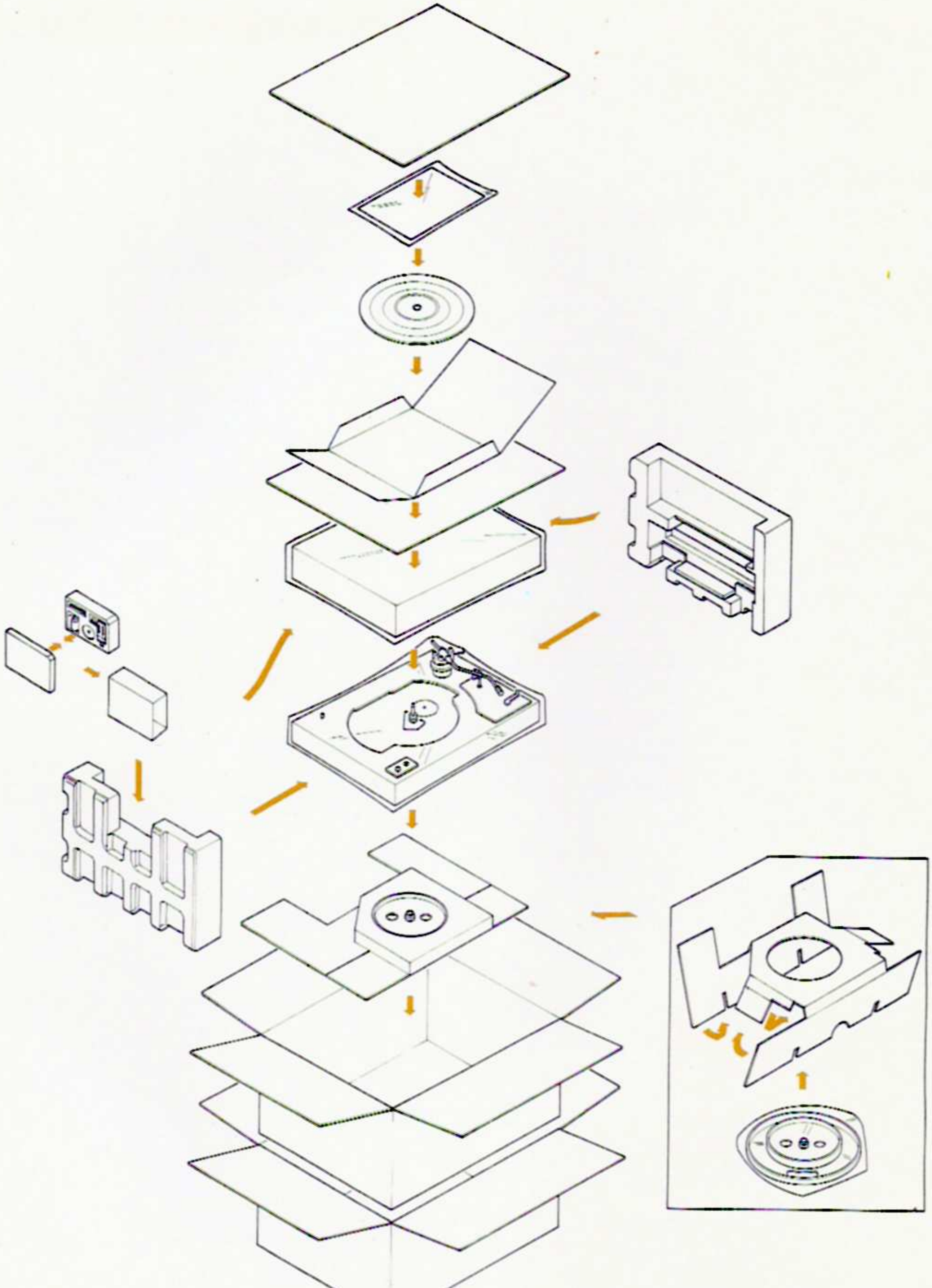


Figure 6. Packing Instructions

The Sound of Marantz
is the compelling warmth of a Stradivarius.
It is a dancing flute, a haughty bassoon
and the plaintive call of a lone French horn.
The Sound of Marantz is the sound of beauty,
and Marantz equipment is designed to bring you
the subtle joy of its delight.
Wonderful adventures in sound await you
when you discover that the Sound of Marantz
is the sound of music at its very best.

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